Space and Naval Warfare Systems Center Atlantic

Defense Acquisition Management Information Retrieval (DAMIR) - Acquisition Visibility / Service Oriented Architecture Conference

CAPT Bruce Urbon, USN
Commanding Officer

Examples of SOA Experience

- ▼ 1992 - 1999
  - Tactical/Mobile Variant (TMV) Web
  - XML Documentation Re-Engineering / Data Modeling
- ▼ 2001
  - Task Force Web
  - NESI
- ▼ 2002 - 2003
  - FORCEnet
  - Horizontal Fusion Begins (October 2002)
  - Horizontal Fusion Quantum Leap 1 (August 2003)
- ▼ 2004
  - Horizontal Fusion Quantum Leap 2 (August 2004)
  - Marine Link
- ▼ 2005
  - Horizontal Fusion transitions to operations
- ▼ 2006
  - Horizontal Fusion merges with NCES

Benefits of Earlier SOA Experience

▼ Understanding and applying Governance as a Standard Engineering approach across design and development in a System, Systems of Systems (SoS), or Enterprise Environment

  – Internal success through application of a *Standards, Specifications, Patterns and Practices* approach

    – Capability Engineering Approach
    – Coordinated informal testing across SOA programs

  – Driving development with open standards regardless of sponsor

  – Manage the development and implementation process to remain open and flexible and prevent single vendor or proprietary solutions

▼ Align activities across the various Organizations or Agency on implementation of standards

  – Informally engaging and connecting program sponsors in each Organization or Agency to understand requirements to reduce development risk ("Net-Centricity from the bottom-up")

Experience with N6 Task Force Web and OSD's Horizontal Fusion laid the foundation for leading service oriented development within the government.

Current SSC Atlantic SOA Efforts

SPAWAR Systems Center ATLANTIC

SSC LANT applies ***Standards, Specifications, Patterns and Practices*** across all SOA efforts

▼ Navy
- Consolidated Afloat Network Enterprise System (CANES)
- ONR C2 RPC / NAVY SOA
- Distributed Common Ground System - Navy (DCGS-N)
- Secure Service Discovery Congressional

▼ Marine Corps
- Marine Air Ground Task Force C2 (MAGTF C2)
- Marine Link
- Distributed Common Ground System - Marine Corps (DCGS-MC)

▼ Office Secretary of Defense (OSD)
- Regional International Outreach (RIO) / SPAWAR Collaboration Hub & Online Learning Architecture (SCHOLAR)
- OSD AT&L Acquisition Visibility Tool
- Adaptive Planning/Force Management Planning & Execution JCTD

▼ Federal
- Domestic Nuclear Detection Office (DNDO)

▼ Joint
- Net-Enabled Command Capability (NECC)
- Net-Centric Enterprise Services (NCES)
- National Senior Leaders Decision Support Service (NSLDSS) JCTD
- Joint Explosive Ordinance Detail (JEOD)

▼ SSC Atlantic
- Service Oriented Architecture – University (SOA-U)
- Multi-Service SOA Consortium
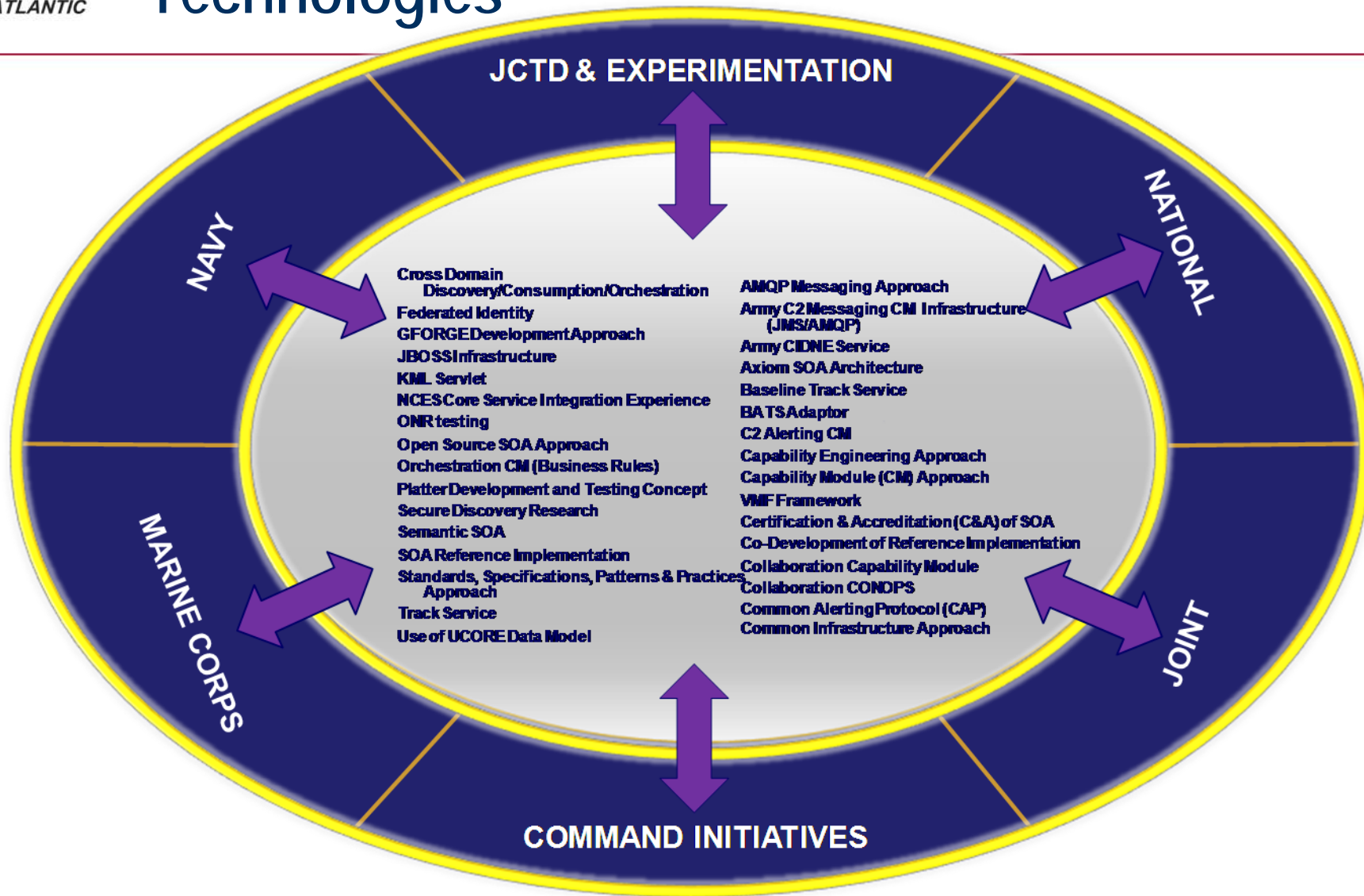- SSC-Atlantic Innovation Program

▼ And the list goes on…..

Lessons Learned
- ✓ Collaboration
- ✓ Informal Testing
- ✓ Shared Artifacts
- ✓ Shared Approaches
- ✓ Shared Code

Co-evolution of SOA processes and artifacts

Read: GOVERNANCE

Adapting Net-centric Processes and Technologies

The Future…

▼ Service orientation is maturing and thus will continue to evolve
- Both the design pattern and the technologies

▼ Collaboration is essential
- Collaborative development across DoD programs is imperative to assure interoperability

▼ Educating the workforce
- Practical applications across all the competencies
- Expanding SOA University across Team SPAWAR geographic locations

▼ Formalizing processes
- Vetting informal processes and approaches across Team SPAWAR and throughout DoD
- Institutionalizing these processes and approaches
- Continual evolution of the processes

Maturing processes and SOA community to realize joint interoperable SOA solutions.